Check List the journal of biodiversity data

NOTES ON GEOGRAPHIC DISTRIBUTION

Check List 11(2): 1592, February 2015 doi: http://dx.doi.org/10.15560/11.2.1592
ISSN 1809-127X © 2015 Check List and Authors

New geographical records of *Myrcia s.l.* (Myrteae, Myrtaceae) from South America, with a focus on Brazilian taxa

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Abstract: New geographical records for 29 species of *Myrcia s.l.* (Myrtaceae) from the Neotropics are presented here. They occur in the Amazon, Atlantic Forests and "*Cerrado*" vegetation of Bolivia, Brazil, Colombia, Paraguay, and Peru. The first occurrences of species are also cited for Bolivia, Colombia, Paraguay, and Peru. Short diagnostic descriptions, taxonomic and ecological comments, and geographic distribution maps are also presented.

Key words: Amazon Forest, Atlantic Forest, Bolivia, Brazil, *Cerrado*, Colombia, Neotropics, Paraguay, Peru

The *Catálogo de Plantas e Fungos do Brasil* (Forzza et al. 2010) provides an updated list of Brazilian algae, land plants and fungi with almost 41,000 species, of which more than 46% are endemic to Brazil (Forzza et al. 2012). The number of vascular plants cited is close to 33,000 and yet this number of species is far from a complete account of the native plant diversity as a whole (Forzza et al. 2012; Sobral and Stehmann 2009).

Myrtaceae is pan-tropical distributed with ca. 133 genus and more than 5,750 species and has the tropical to southern temperate America as one of the centers of diversity (Wilson et al. 2001; WCSP 2014). Brazil is the most Myrtaceae species rich country in South America with ca. 1,000 species which more than 75% endemics. (Sobral et al. 2014).The distribution of the Myrtaceae species has recently been updated by Sobral et al. (2014) and WCSP (2014). Data related to Myrtaceae from South America have increased in the last four years (Amorim and Alves 2012a, 2012b, 2011; Faria and Proença 2012; Giaretta and Fraga 2014; Kawasaki and Pérez 2012; Lourenço and Barbosa 2012; Lourenço et al. 2013; Mazine and Faria 2013; Oliveira et al. 2013; Proença et al. 2014, 2011; Sobral et al. 2010), and *Myrcia s.l.* (*sensu* Lucas et al. 2011) is one the most updated genus (Amorim and Alves 2012c; Amorim et al. 2014, 2013; Nic Lughadha et al. 2012a, 2012b, 2010; Sobral 2013, 2010).

Myrcia s.l. is the second richest genus of Myrtaceae in the Neotropics with ca. 770 species distributed from Mexico to Uruguay (WCSP 2014). The most species-rich *Myrcia s.l.* vegetation are the Atlantic Forest, Brazilian Amazon, and *Cerrado* with 254, 99, and 91 species respectively (Sobral et al. 2014). With the aim of contributing to a further update of the geographic distribution of *Myrcia* species, 44 new geographical records in the genus are provided here. The data come from analyzed specimens available at BM, BR, C, ESA, G, INPA, K, M, MBML, NY, P, PEUFR, UFP, and US Herbaria collection (Thiers 2014).

1. ***Myrcia amapensis*** McVaugh, *Mem. New York Bot. Gard.* 18(2): 80. 1969. Figure 1.

Trees, ca. 25 m tall. Leaves 2.4–4 × 1.5–2 cm, ovate to rotund, apex acute, base rounded or cuneate, midvein flat or raised on the adaxial surface, petiole 0.2–0.4 cm long. Inflorescence paniculiform, main floral axis ca. 10 cm long; calyx 5-lobed, acute; staminal disk and style base glabrous. Fruits ca. 1 cm in diameter, subgloboid, dark when mature.

Myrcia amapensis is endemic to northern Brazil (Sobral et al. 2014; WCSP 2014) and previously known in Amapá, northern Brazil (McVaugh 1969). Here new geographical localities are recorded for "*Terra Firme*" Forest in Amazonas (Brazil).

MATERIAL EXAMINED: BRAZIL. Amazonas: Manaus, Reserva Florestal Ducke, 5.X.1989, fr., *M.L. Kawasaki et al. s/n* (NY, US 3327113).

2. ***Myrcia amazonica*** DC., *Prodr.* 3: 250. 1828. Figure 1

Trees, 8–10 m tall. Leaves 6–14 × 2.5–5 cm, elliptic,

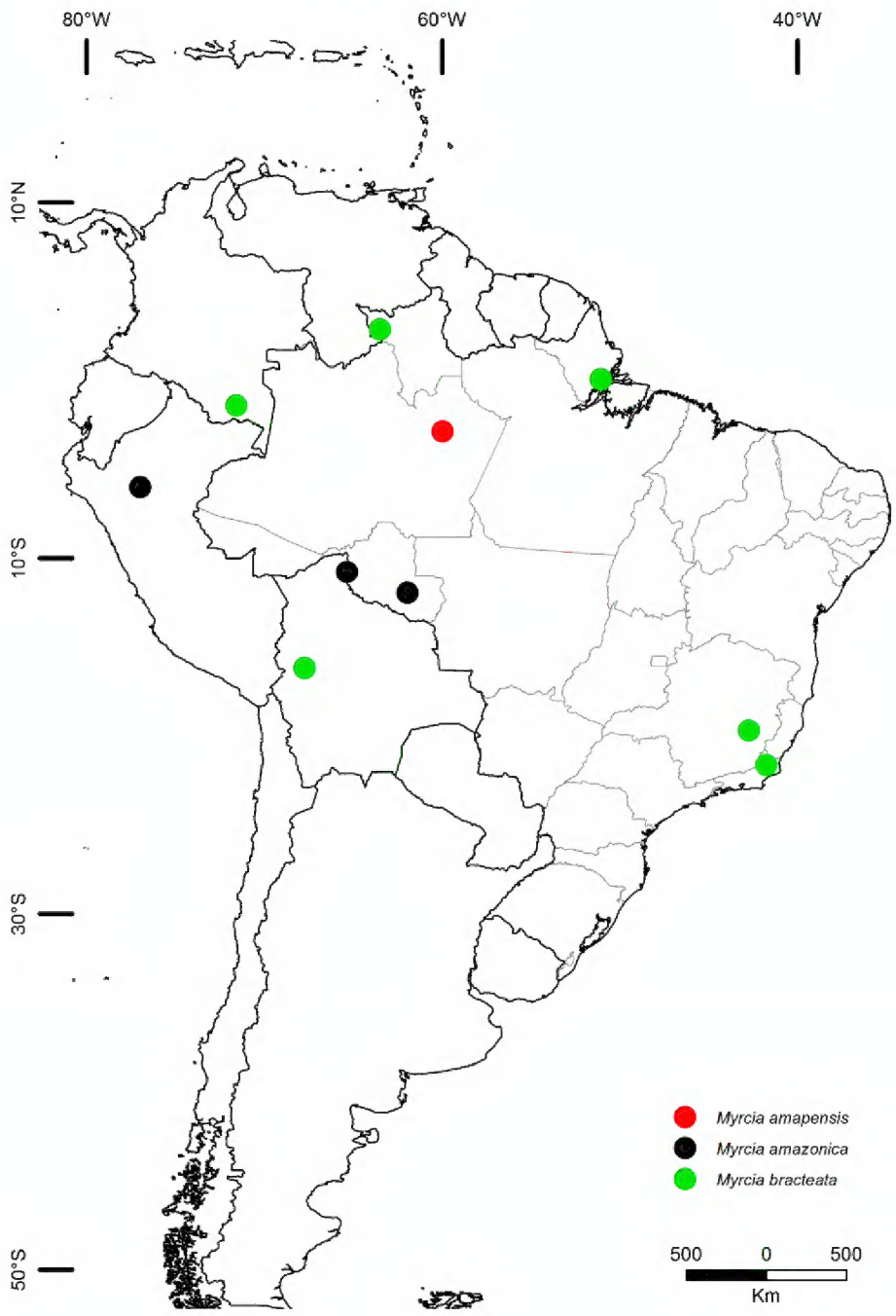

Figure 1. New records of *Myrcia* from South America. *M. amapensis* (red), *M. amazonica* (black), *M. bracteata* (green).

obelliptic to obovate, apex acute to obtuse, base cuneate, midvein sulcate on the adaxial lamina surface, petiole 0.3–0.5 cm long. Inflorescence paniculiform, main axis 10-15 cm long; calyx 5-lobed, acute; staminal disk and style base glabrous. Fruits 1–1.2 cm in diameter, subgloboid, dark when mature.

Myrcia amazonica is widely distributed in tropical America (WCSP 2014) including in Brazil (Sobral et al. 2014). However, new geographical localities are recorded in Rondônia (Brazil) and the species is first recorded for Amazon Forest in Peru.

Material examined: BRAZIL. Rondônia: Costa Marques, Chapada dos Parecís, Distrito de Alta Floresta, 15.VI.1984, fr., *C.A. Cid-Ferreira et al. 4539* (INPA, K, NY, RB, US); Vilhena, Chapada dos Parecís, 5.XI.1979, fr., *M.G. Vieira et al* 930 (INPA, MO, RB, US); 28.X.1979, fr., *M.G. Vieira et al. 747* (INPA, RB, US); Ribeirão, road Abunã-Guajará-Mirim, 26.VII.1968, fl., *G.T. Prance et al. 6522* (INPA, K, NY, US). PERU. Moyobamba, s/d, fl., *Mathews s/n* (P 5258810).

3. ***Myrcia bracteata*** (Rich.) DC., *Prodr.* 3: 245. 1828. Figure 1.

Shrubs to trees, 1.8–10 m tall. Leaves 5.5–17.5 × 2.5–6 cm, elliptic, apex acuminate, base cuneate, midvein flat or raised on the adaxial lamina surface, petiole 0.2–0.4 cm long. Inflorescence paniculiform, main axis 8–9 cm long; calyx 5-lobed, acute; staminal disk and style base pubescent. Fruits 0.5 cm in diameter, ellipsoid, pubescent, red to dark when mature.

Myrcia bracteata is known from French Guyana to northern Brazil (WCSP 2014) in the Amazon vegetation (Sobral et al. 2014). Here new geographical localities are recorded for Brazilian Amazon in Amapá and Roraima, and also for the Atlantic Forest in Minas Gerais and Rio de Janeiro. It is also the first geographical record of this species for Colombia and Bolivia in the Amazon Forest domain.

Material examined: BOLIVIA. Coroico: 1839, fr., *Pentland 95* (P); Nordyungas, Polo-Polo bri Coroico, X-XI.1912., fl., *O. Buchtien 629* (G); Yungas: Mururata, 1839, fr., *Pentland s.n.* (P 546155). BRAZIL. Amapá: Macapá, 5 Km leste de Porto Santana, 10.III.1962, fr. *J. Mattos & N. Mattos 9906* (SP, US). Minas Gerais: Marliéria, Parque Estadual do Rio Doce, 18.IX.1975, fl., fr., *E.P. Heringer & G. Eiten 15033* (MO, US). Rio de Janeiro: São Fidelis, 11.II.1876, fl., *A. Glaziou 9845* (P). Roraima, Surucucu to Uaicá, 19.II.1971, fl., fr., *G.T. Prance et al.13588* (INPA, K, NY, UFSC, US); 10.II.1971, fl., fr., *G.T. Prance et al. 10615* (INPA, K, UFSC); 14.II.1969, fl., *G.T. Prance et al. 9902* (INPA, K, MO); Vila Pacaraima, 18.X.1991, fl., *S. Almeida & M. Cordeiro 533* (ESA, HUEFS, K, UB). COLOMBIA. Amazonas: rio Igara-Parana, 31.I.1974, fl., *J. Gasche & J. Desplats 1188* (P); 22.I.1974, fl., *J. Gasche & J. Desplats 152* (G), 9.VI.1974, fl., *C. Sastre 3252* (G, P); Vaupès: Yavareté, 22.XI.1952, fl., *R. Romero 3665* (P).

4. ***Myrcia brunea*** Cambess., In A. de Saint-Hilaire, *Fl. Bras. merid.* 2: 306. 1832. Figure 2.

Shrubs to trees, 2–3 m tall. Leaves 6.5–10 x 4–5.5 cm, elliptic or ovate, apex acute, basis cuneate to rounded, midvein sulcate near the base and flat near the apex on adaxial surface, petiole 0.5–0.7 cm long. Inflorescence paniculiform, main axis 4–4.5 cm long (young); calyx 5-lobed, acute; staminal disk and style base pubescent. Fruits 1 cm in diameter, globoid, pubescent.

Myrcia brunea is endemic to the Brazilian Atlantic Forest and considered restricted to the state of Minas Gerais (Sobral et al. 2014; WCSP 2014). Here new geographical localities are recorded for the Atlantic Forest in São Paulo (Brazil).

Material examined: BRAZIL. São Paulo: Paranapiacaba, Estação Ecológica, 25.VIII.1968, fr., *O. Handro 2063* (K); 30.VIII.1961, fr., *J. Mattos & O. Handro 9091* (NY, SP).

5. ***Myrcia cardiaca*** O.Berg in C.F.P. von Martius & auct. suc. (eds.), *Fl. bras.* 14(1): 204. 1857. Figure 2.

Trees, ca. 6 m tall. Leaves 2–6 × 1.5–3 cm, lanceolate, apex acuminate to rounded, base cordate, midvein flat or raised on the adaxial lamina surface, sessile. Inflorescence paniculiform, main axis 3–5 cm long; calyx

5-lobed, acute; staminal disk and style base puberulent. Fruits not seen.

Myrcia cardiaca grows in "*Cerrado*" vegetation and is known from the states of Goiás and Mato Grosso (Sobral et al. 2014; WCSP 2014). Here new geographical localities are recorded in São Paulo (Brazil).

MATERIAL EXAMINED: BRAZIL. São Paulo: Moji-Guaçu, Fazenda Campininha, 22.IX.1960, fl., *J.R. Mattos & N.F. Mattos 8332* (SP, US).

6. ***Myrcia dealbata*** DC., *Prodr.* 3: 254. 1828. Figure 2.

Shrubs to trees, ca. 1–4 m tall. Leaves 4–9.5 × 2–5 cm, lanceolate, apex acute, base rounded to cordate, midvein sulcate on the adaxial lamina surface, petiole sessile to 0.1cm long. Inflorescence paniculiform, main axis 7-20 cm long; calyx 5-lobed, rounded; staminal disk and style base glabrous. Fruits ca. 0.5–1 cm in diameter, subgloboid, purplish to dark-purplish when mature.

Myrcia dealbata is endemic to Brazil (WCSP 2014) and known from "*Cerrado*" vegetation in Minas Gerais (Sobral et al. 2014). Here new geographical localities are recorded in Distrito Federal, Goiás and Mato Grosso (Brazil).

MATERIAL EXAMINED: BRAZIL. Distrito Federal: Parque Municipal do Gama, 12.XI.1965, fr., *H.S. Irwin et al. 10205* (NY, RB, US). Goiás: Rio Bonifácio to Estiva, III.1828-II.1830, fr., L.B. Smith & R.C. Smith s/n (K 342780). Mato Grosso: Serra Azul, road to Xavantina, 17.VI.1966, bf., *H.S. Irwin et al. 17360* (MO, NY, UB, US); Xavantina, Rio das Mortes, 24.VIII.1968, bf., fl., *G. Eiten & L.T. Eiten 8324* (MO, SP, UB, US); upper Rio Araguaia, 18.VI.1966, fl., *H.S. Irwin et al. 17417* (NY, US).

7. ***Myrcia dichasialis*** McVaugh, *Fieldiana Bot.* 29: 190. 1956. Figure 2.

Shrubs to trees 2–6 m tall. Leaves 7–13.5 × 4.8–6 cm, lanceolate or obovate, apex acute, base cuneate to rounded, midvein sulcate on the adaxial lamina surface, petiole 0.3–0.5 cm long. Inflorescence paniculiform, main axis 11–12 cm long; calyx 5-lobed, rounded; staminal disk and style base pubescent. Fruits 0.8 cm in diameter, ellipsoid, glabrous.

Myrcia dichasialis is recorded to Venezuela and Peru (WCSP 2014). Here new geographical localities are recorded for the Amazon Forest in Colombia (Prov. Amazonas).

MATERIAL EXAMINED: COLOMBIA. Amazonas: Letícia, 31.I.1969, fl., *C. Sastre & A. Gomez-Pompa 550* (P).

ADDITIONAL MATERIAL: PERU. Loreto: Rio Loreto-Yacu, 06.II.1969, fr., *C. Sastre & R. Echeverry 634* (P); Iquiros, Muena-Caño, 9.II.1932, fl., *Y. Mexia 6508* (G).

8. ***Myrcia eximia*** DC., *Prodr.* 3: 248. 1828. Figure 3.

Shrubs to trees 2–10 m tall. Leaves 9–14.5 × 3.5–5.5 cm, elliptic to ovate, apex acute, base cuneate, midvein

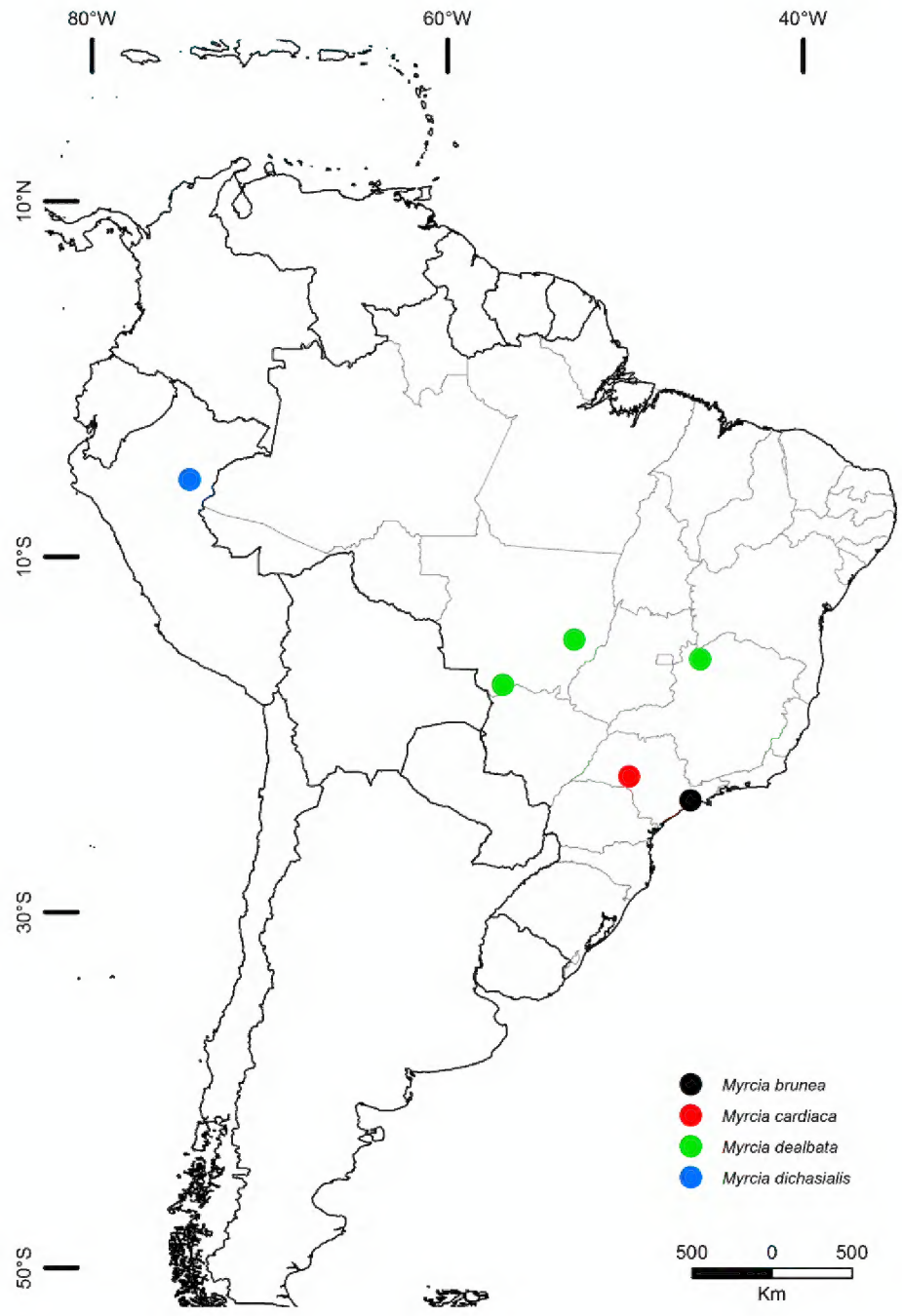

Figure 2. New records of *Myrcia* from South America. *Myrcia brunea* (black), *M. cardiaca* (red), *M. dealbata* (green), *M. dichasialis* (blue).

flat or raised on the adaxial lamina surface, petiole 0.5–1 cm long. Inflorescence paniculiform, main axis 9–10 cm long; calyx 5-lobed, rounded; staminal disk and style base puberulent. Fruits 0.5 cm in diameter ellipsoid, glabrous.

Myrcia eximia is endemic to Brazil and recorded for "*Cerrado*" and Atlantic Forest vegetation in the states of Bahia, Minas Gerais, Goiás (Sobral et al. 2014). Here new geographical localities are recorded in Mato Grosso and Piauí (Brazil).

MATERIAL EXAMINED: BRAZIL. Mato Grosso: s.loc., 06.X.1967, fl., *G. Argent et al. 6673* (NY, P, UB); Garapú, 01.X.1964, fl., *H.S. Irwin & T.R. Soderstrom s/n* (US 2861700); Xavantina, 15.IX.1967, fl., *G. Argent et al. 6409* (NY, UB, P); 02.VIII.1967, fl., *J.A. Ratter & T. Ramos 276* (P, UB); Xavantina-Cachimbo road, 24.XI.1967, fr., *D. Philcox et al. 3235* (NY, P, RB, UB). Piauí: s.loc., 1866, fl., *Gardner 2265* (G, P).

9. ***Myrcia fenzliana*** O.Berg in C.F.P. von Martius & auct. suc. (eds.), *Fl. bras.* 14(1): 196. 1857. Figure 3.

Treelet 3–5 m tall. Leaves 8.5–17 × 3.5–8 cm, elliptic, ovate or lanceolatte, apex acute, acuminate or rounded, base attenuate, or rounded, midvein sulcate near from the basis and flat near from the apex on adaxial surface,

Figure 3. New records of *Myrcia* from South America. *M. eximia*.(black), *Myrcia fenzliana* (red), *M. gestasiana* (green), *M. ilheosensis* (blue).

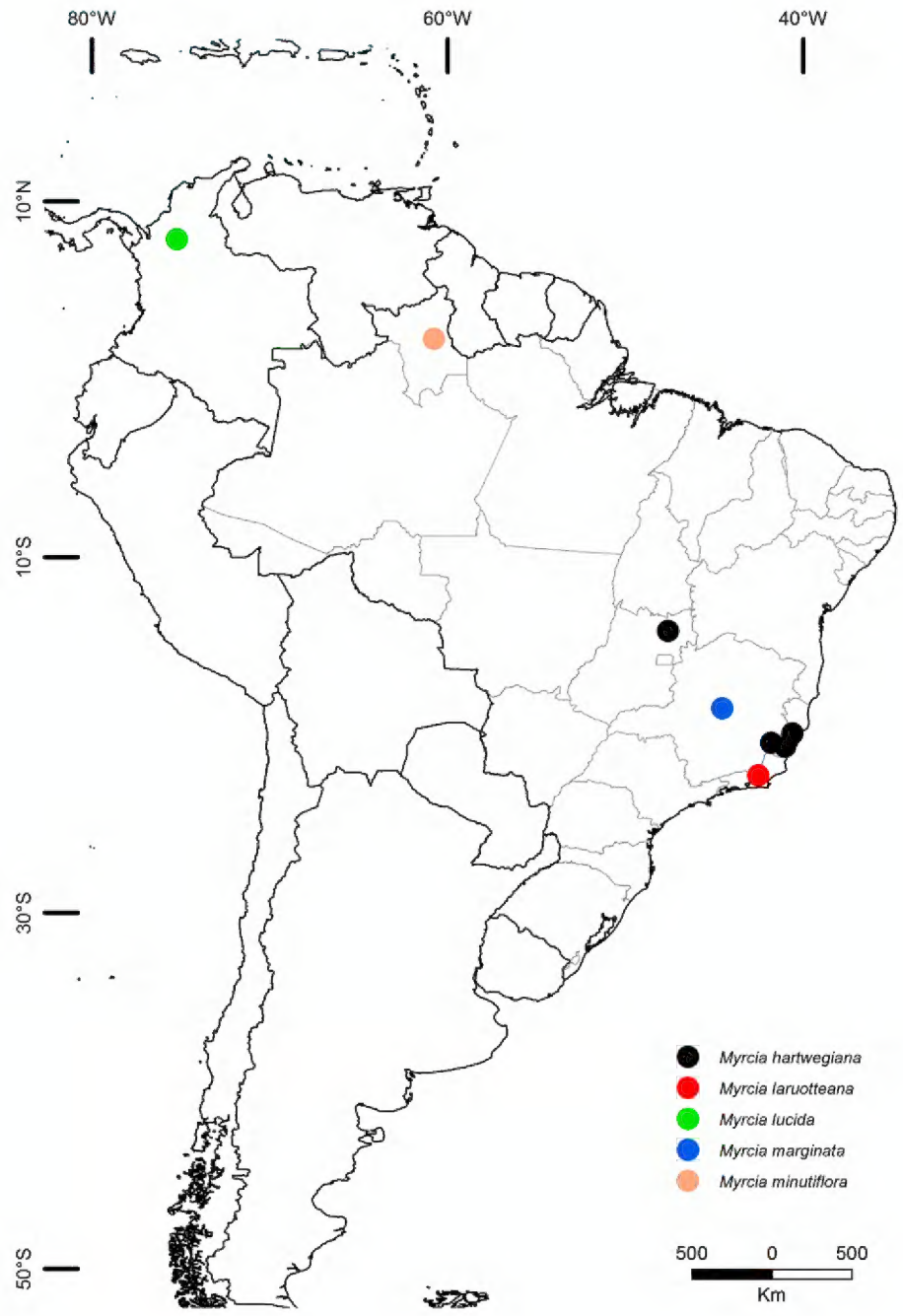

Figure 4. New records of *Myrcia* from South America. *M. hartwegiana* (black), , *M. laruotteana* (red), *M. lucida* (green), *M. marginata* (blue), *M. minutiflora* (pink).

petiole 0.5 cm long. Inflorescence paniculiform, main axis 12–24 cm long; calyx 5-lobed, acute; staminal disk and style base pubescent. Fruits 0.7 cm in diameter, subglobose, puberulent.

Myrcia fenzliana occurs from Dominican Republic to southern Brazil (Sobral et al. 2014; WCSP 2014), recorded for "*Cerrado*" and Atlantic Forest from Bahia to São Paulo (Sobral et al. 2014). Here new geographical localities are recorded for the northern portion of "*Cerrado*" vegetation in Maranhão (Brazil).

Material examined: BRAZIL. Maranhão: Barra do Corda, 14.VII.1976, fr., *Miguel 38* (PEUFR).

10. ***Myrcia gestasiana*** Cambess. In A. de Saint-Hilaire, *Fl. Bras. merid.* 2: 303. 1832. Figure 3.

Trees, 4 m tall. Leaves 6–10.5 × 2–4 cm, elliptic, apex rounded to acute, base rounded, midvein sulcate at base and flat at apex of the adaxial lamina surface, petiole 0.4–0.8 cm long. Inflorescence paniculiform, main axis 6.5–7.5 cm long (when immature); calyx 5-lobed, acute; staminal disk and style basis puberulent. Fruits not seen.

Myrcia gestasiana is endemic to fragments of Atlantic Forest in the states of Espírito Santo, Rio de Janeiro (Sobral et al. 2014). Here new geographical localities are recorded in Minas Gerais (Brazil).

Material examined: BRAZIL. Minas Gerais: Joaquim Felício, Serra do Cabral, 18.XI.1997, fl., *G. Hatschbach & E. Barbosa 67215* (C, G, MBM); 18.I.1996, fl., *G. Hatschbach & J.M. Silva 63349* (MBM, NY); Rio da Onça, 19.I.1996, fl., *G. Hatschbach & J.M. Silva 64416* (C, G, INPA, MBM, SP, UB).

11. ***Myrcia hartwegiana*** (O. Berg) Kiaersk., *Enum. Myrt. bras.:* 109. 1893. Figure 4.

Shrubs to trees 1.5–4 m m tall. Leaves 3–6.6 (9) × 2–3.5 (4) cm, elliptic, ovate or obovate, apex rounded (acute), base cuneate or rounded, midvein sulcate near from the basis and flat near from the apex on adaxial lamina surface, petiole 0.2–0.4 cm long. Inflorescence paniculiform, main axis 7 cm long; calyx 5-lobed, acute or rounded; staminal disk and style base pubescent. Fruits 0.5 cm in diameter, globose, puberulent.

Myrcia hartwegiana is endemic to Brazil and recorded for Atlantic Forest from Minas Gerais to Rio Grande do Sul (Sobral et al. 2014). Here new geographical localities are recorded for Atlantic Forest in Espírito Santo and "*Cerrado*" in Goiás (Brazil).

Material examined: BRAZIL. Espírito Santo, Divino de São Lourenço, Parque Nacional do Caparaó, 24.I.2008, fl., *L. Kollmann et al.10458* (MBML, RB); Santa Teresa, Reserva Biológica Augusto Ruschi, 05.IX.2003, fl., *J. Rossini & E. Bausen 546* (BHCB, MBML); Vargem Alta, 18.I.2008, fl., *L. Kollmann et al. 10286* (BHCB, MBML). Goiás: Alto Paraíso de Goiás, 04.XII.2004, fl., *E. Chaves & L.H. Soares-Silva 124* (ESA, UB).

12. ***Myrcia ilheosensis*** Kiaersk., *Enum. Myrt. bras.:* 109. 1893. Figure 3.

Shrubs to trees, 2–6 m tall. Leaves 5.5–8 × 2.5–4 cm, elliptic to obelliptc, apex rounded, base cuneate, midvein sulcate on adaxial lamina surface, sessile to 0.6 cm long. Inflorescence paniculiform, main axis 6.5–9 cm long; calyx 5-lobed, acute; staminal disk and style base pubescent. Fruits 0.4–0.5 cm in diameter, subgloboid, puberulent.

Myrcia ilheosensis occurs from French Guiana to southern Brazil (Sobral et al. 2014; WCSP 2014). Here new geographical localities are recorded in Minas Gerais (Brazil).

Material examined: BRAZIL. Minas Gerais: s.loc., s.d., fl., *Riedel 622* (R, US).

13. ***Myrcia laruotteana*** Cambess. In A. de Saint-Hilaire, *Fl. Bras. merid.* 2: 311. 1832. Figure 4.

Shrubs, 1–2 m tall. Leaves 3.5–5 × 1–1.6 cm, elliptic to lanceolate, apex acute, base cuneate, midvein sulcate on adaxial lamina surface, petiole 0.1 cm long. Inflorescence paniculiform, main axis 5–6 cm long; calyx 5-lobed, rounded; staminal disk and style base glabrous. Fruits 0.4–0.6 in diameter, puberulent to glabrous.

Myrcia laruotteana grows from Brazil to Paraguay (WCSP 2014) and is widely distributed in the Amazon and Atlantic Forests, "*Caatinga*", and "*Cerrado*" vegetation (Sobral et al. 2014). However, there is a lack of collections from some states. Here new geographical localities are recorded in Rio de Janeiro (Brazil).

Material examined: BRAZIL. Rio de Janeiro: Nova Friburgo, 4.XI.1881, fl., *A. Glaziou 13451* (G, P, US).

Additional material: BRAZIL. Paraná: São José dos Pinhais, 20.XII.1967, fr., *G. Hatschbach 18154* (C, MBM, MO, NY).

14. ***Myrcia lucida*** McVaugh, *Mem. New York Bot. Gard.* 18(2): 100. 1969. Figure 4.

Trees, 3–4 m tall. Leaves 4.5–7 × 1.1–2 cm, lanceolate, apex acuminate, base cuneate, midvein sulcate near from the basis and flat near from the apex on the adaxial lamina surface, petiole 0.4–0.6 cm long. Inflorescence paniculiform, main axis 4–5 cm long (when young); calyx 5-lobed, acute; staminal disk and style base glabrous. Fruits 1 cm in diameter, globoid, glabrous, red when mature.

Myrcia lucida is recorded from Venezuela, Bolivia, and Brazil (WCSP 2014) where it is found in the states of Amazonas and Mato Grosso in Amazon Forest and related vegetation (Sobral et al. 2014). Here new geographical localities are recorded for Amazon Forest in Colombia (Department of Del Meta).

Material examined: COLOMBIA. Depto. Del Meta: Puerto Gaitán, rio Yucao, 12.III.1971, fl., *P. Pinto & C. Sastre 1170* (COL, P).

Additional material: BRASIL. Amazonas: São Gabriel da Cachoeira, 27.XI.1987, fr., *M.L. Kawasaki 309* (INPA, K, MO).

15. ***Myrcia marginata*** O. Berg in C.F.P. von Martius & auct. suc. (eds.), *Fl. bras.* 14(1): 565. 1859. Figure 4.

Shrubs, 3 m tall. Leaves 6.5–10.5 × 3.5–6 cm, lanceolate or ovate, apex acute, base cuneate, rounded or cordate, midvein flat on the adaxial lamina surface, petiole sessile to 0.2 cm long. Inflorescence paniculiform, main axis 8–9 cm long; calyx 5-lobed, rounded; staminal disk and style base pubescent. Fruits not seen.

Myrcia marginata is recorded from the western region of Brazil in *Cerrado* vegetation in the states of Goiás and Mato Grosso (Sobral et al. 2014; WCSP 2014). Here new geographical localities are recorded in Minas Gerais (Brazil).

Material examined: BRAZIL. Minas Gerais: s.loc., s.d., fl., *A. Glaziou 19359* (C, P).

16. ***Myrcia minutiflora*** Sagot, *Ann. Sci. Nat. Bot.* 20: 185. 1885. Figure 4.

Shrubs, up to 3 m tall. Leaves 8.5–15 × 3–5 cm, elliptic to obovate, apex caudate, base cuneate, midvein sulcate on the adaxial lamina surface, petiole 0.2–0.4 cm long. Inflorescence paniculiform, main axis 10–11 cm long; calyx 4-lobed, acute; staminal disk and style base glabrous. Fruits ca. 1.5 cm in diameter, subgloboid, yellow when mature.

Myrcia minutiflora is found from French Guiana to northern Brazil (WCSP 2014) in the Amazon Forest (Sobral et al. 2014). Here new geographical localities are recorded in Roraima (Brazil), confirming the species as widely distributed in the Amazon.

Material examined: BRAZIL. Roraima: Serra da Lua, Igarapé Camarão, 23.I.1969, fr., *G.T. Prance et al. 9382* (INPA, NY, US).

17. ***Myrcia multiflora*** (Lam.) DC., *Prodr.* 3: 244. 1928. Figure 5.

Shrubs to trees, 3–5 m tall. Leaves 5–7 × 2.5–3.5 cm, lanceolate to elliptic, apex acute, base cuneate, midvein flat or raised on the adaxial lamina surface, petiole 0.2–0.4 cm long. Inflorescence paniculiform, main axis ca. 5–6 cm long; calyx 5-lobed, acute, unequal, 4 larger (2 mm long), 1 shorter (1 mm long); staminal disk and style

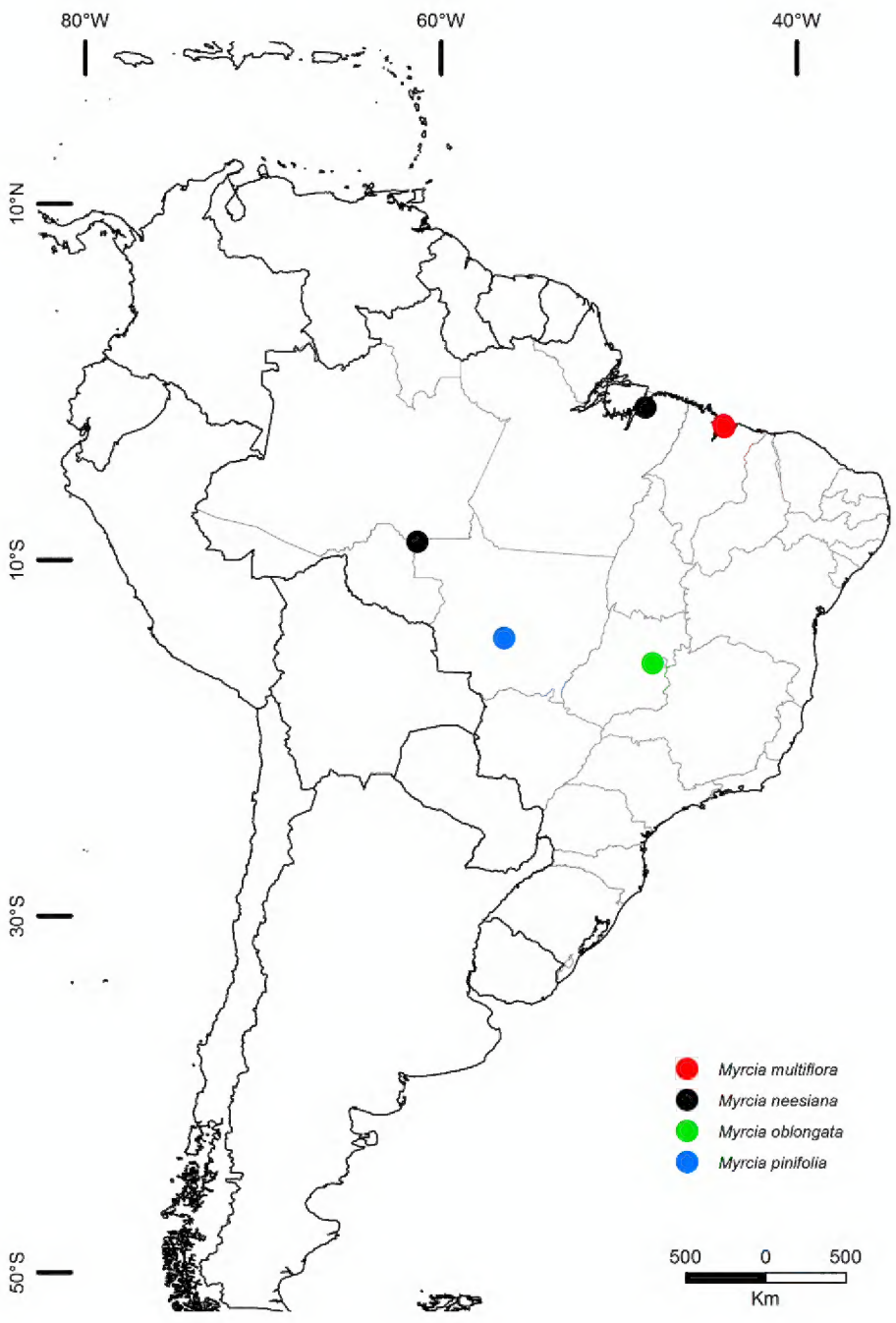

Figure 5. New records of *Myrcia* from South America. *M. multiflora* (red),, *M. neesiana* (black), *M. oblongata* (green), *M. pinifolia* (blue).

base glabrous. Fruits ca. 0.6 cm in diameter, subgloboid.

Myrcia multiflora is widely distributed in South America, from Panama and Trinidad and Tobago to Uruguay (WCSP 2014). In Brazil, it occurs in the Amazon, Atlantic Forest, *Cerrado*, and *Caatinga* vegetation (Sobral et al. 2014). Here new geographical localities are recorded for restingas in the Atlantic Forest domain in Maranhão (Brazil).

Material examined: BRAZIL. Maranhão: Raposa, 04.XI.2013, fl., *B.S. Amorim 1869* (UFP); São José do Ribamar, Praia de Itapary, 07.XI.2013, fl., fr., *B.S. Amorim 1876* (UFP).

18. ***Myrcia neesiana*** DC., *Prodr*. 3: 249. 1828. Figure 5.

Shrubs to trees, 3-6 m tall. Leaves 10–26 × 3.8–7.5 cm, elliptic to obelliptic, apex acute, base cuneate, midvein flat or raised on the adaxial lamina surface, petiole 0.6–1.2 cm long. Inflorescence paniculiform, main axis ca. 5.5–8 cm long; calyx 5-lobed, rounded; staminal disk and style base glabrous. Fruits ca. 0.5 cm in diameter, subgloboid.

Myrcia neesiana occurs in western South America (Bolivia, Ecuador, and Peru) and northern Brazil (WCSP 2014) in the Amazon Forest (Sobral et al. 2014). Here new geographical localities are recorded for Amazon and related biomes in Pará and Mato Grosso (Brazil).

Material examined: BRAZIL. Mato Grosso: Tabajara, Rio Machado, XII.1931, fl. bud, *B.A. Krukoff 1459* (BM, K, MO, NY, P, US). Pará: Belém, Instituto Agronômico do Norte, 13.I.1944, fr., *A. Silva 26* (IAN, NY, US).

19. ***Myrcia oblongata*** DC., *Prodr*. 3: 251. 1828. Figure 5.

Shrubs to trees, 3–5 m tall. Leaves 4.5–9.5 × 1.5–3.1 cm, elliptic to obelliptic, apex rounded to acute, base cuneate, midvein flat on the adaxial lamina surface, petiole 0.4–0.6 cm long. Inflorescence paniculiform, main axis 8–9 cm long; calyx 5-lobed, acute; staminal disk and style base glabrous. Fruits ca. 0.5 cm in diameter, globoid, glabrous.

Myrcia oblongata is recorded in Argentina, Paraguay, and Brazil (WCSP 2014) where it can be found in the Atlantic Forest from Minas Gerais to Rio Grande do Sul (Sobral et al. 2014). Here new geographical localities are recorded for gallery forest in *Cerrado* vegetation in Goiás (Brazil).

Material examined: BRAZIL. Goiás: Guariroba, 16.X.1894, fl., *A. Glaziou 21189* (P); Lagoa de Mestre d'Armas, 29.XII.1894, fl., *A. Glaziou 21144* (P).

Additional material: ARGENTINA. Corrientes, s.d., fr., *M.A. Bonpland 957* (P).

20. ***Myrcia pinifolia*** Cambess. in A. de Saint-Hilaire, *Fl. Bras. merid.* 2: 333. 1832. Figure 5.

Shrubs, 0.5–1 m tall. Leaves 2–3.5 × 0.1–0.2 cm, linear, apex rounded to acute, base cuneate, midvein flat on the adaxial lamina surface, petiole 0.1 cm long. Inflorescence paniculiform, main axis ca. 3–4 cm long.; calyx 5-lobed, rounded; staminal disk glabrous, style base not seen. Fruits 0.4 cm in diameter, subgloboid, glabrous.

Myrcia pinifolia is distributed from Bolivia to western Brazil (WCSP 2014), where it is recorded for *Cerrado* vegetation in the states of Goiás and Bahia (Sobral et al. 2014). Here new geographical localities are recorded in Mato Grosso (Brazil), corroborating the connection among populations from savanna vegetation in Bolivia and Brazil.

Material examined: BRAZIL. Mato Grosso: Diamantino, Tapurá, 01.XI.1987, fr., *S. Tsugaru & H.A. Guinoza B1919* (NY).

21. ***Myrcia pubiflora*** DC., *Prodr*. 3: 249. 1828. Figure 7.

Shrubs to trees, 2–5 m tall. Leaves 3.5–5 × 1.5–2.1 cm, elliptic to obelliptic, apex rounded, base cuneate, midvein sulcate on the adaxial lamina surface, petiole 0.2–0.3 cm long. Inflorescence paniculiform, main axis ca. 5 cm long (young); calyx 5-lobed, rounded; staminal disk and style glabrous. Fruits 0.5–0.7 cm in diameter, globoid, pubescent.

Myrcia pubiflora is recorded to Bolivia, Paraguay and Brazil (WCSP 2014), where it occurs from the state of Espírito Santo to Rio Grande do Sul in Atlantic Forest

Figure 6. New records of *Myrcia* from South America. *M. salicifolia* (black), *M. saxatilis* (red), *M. tomentosa* (blue).

Figure 7. New records of *Myrcia* from South America. *M. pubiflora* (black), *M. pulchra* (square), *M. rufipila* (white circle).

and *Cerrado* vegetation (Sobral et al. 2014). Here new geographical localities are recorded for the Atlantic Forest in Rio de Janeiro and Bahia (Brazil).

Material examined: BRAZIL. Bahia: Ilhéus, Acuripe, 11.VIII.1995, fr., *G. Hatschbach & J.T. Motta 6330* (G, MBM); Rio de Janeiro: Rio de Janeiro, Gávea, 29.VI.1875, fl., *A. Glaziou 8392* (P).

22. ***Myrcia pulchra*** (O.Berg) Kiaersk., *Enum. Myrt. bras.*: 65. 1893. Figure 7.

Shrubs, 1–2 m tall. Leaves 3–6.5 × 1.5–2.6 cm, elliptic, apex rounded, base cuneate to rounded, midvein flat or raised on the adaxial lamina surface, petiole 0.1–0.2 cm long. Inflorescence paniculiform, main axis 4–5 cm long; calyx 5-lobed, rounded; staminal disk pubescent, style puberulent. Fruits ca. 0.5–0.8 cm in diameter, subgloboid.

Myrcia pulchra is endemic to the Brazilian Atlantic Forest from Minas Gerais to Rio Grande do Sul (Sobral et al. 2014). Here the first geographical localities is recorded in Paraguay.

Material examined: PARAGUAY. Cordillera: Cerro Tobaté, 6.IV.1988, fr., *N. Soria s/n* (US 3284621).

Additional material: BRAZIL. Minas Gerais: Grão-Mogol, trilha da Tropa, 11.XII.1989, fl., fr., *P.T. Sano et al. CFCR* 12469 (K, NY, SPF).

23. ***Myrcia salicifolia*** DC., *Prodr*. 3: 246. 1828. Figure 6.

Trees, ca. 4 m tall. Leaves 4.5–7 × 1–2 cm, elliptic to obelliptic, apex rounded, base cuneate, midvein flat or raised on the adaxial lamina surface, petiole 0.2–0.4 cm long. Inflorescence paniculiform, main axis ca. 6 cm long; calyx 5-lobed, rounded; staminal disk and style base glabrous. Fruits ca. 1 cm in diameter, subgloboid.

Myrcia salicifolia occurs from Peru to northern Brazil (WCSP 2014), where the species is cited from the state of Amazonas (Sobral et al. 2014). Here new geographical localities are recorded in Pará (Brazil) and this is the first citation for Colombia (department of Amazonas).

Material examined: BRAZIL. Pará: Óbidos, Ariramba, 06.XII.1987, fl., *G. Martinelli 12304 et al.* (INPA, NY, RB, US). COLOMBIA. Amazonas: Rio Caquetá, 2.III.1952, fl., *R.E. Schultes & I. Cabrera 16364* (INC, US); Rio Apaporis, 16.IV.1951, fr., *R.E. Schultes & I. Cabrera 14019* (INC, US); 15.III.1952, fl., *R.E. Schultes & I. Cabrera 15947* (INC, US), 21.I.1952, fr., *R.E. Schultes & I. Cabrera 14927a* (INC, US).

24. ***Myrcia saxatilis*** (Amshoff) McVaugh, *Mem. New York Bot. Gard.* 18(2): 105. 1969. Figure 6.

Shrubs to trees, 2–5 m tall. Leaves 3–5 × 1.3–2.8 cm, elliptic to ovate, apex rounded, base cuneate to rounded,

midvein flat on the adaxial lamina surface, petiole 0.1–0.2 cm long. Inflorescence paniculiform, main axis ca. 3–4.5 cm long (when young); calyx 5-lobed, rounded; staminal disk and style base glabrous. Fruits 0.9 cm in diameter, globoid, glabrous.

Myrcia saxatilis grows in the Amazon Forest from French Guiana to northern Brazil (WCSP 2014), where it has been considered restricted to the state of Amapá (Sobral et al. 2014). Here new geographical localities are recorded in Amazonas and Pará (Brazil).

Material examined: BRAZIL. Amazonas: Barcelos, Serra do Aracá, 30.VI.1985, fr., *I. Cordeiro 104* (INPA, K, MIRR, NY); 8.II.1984, fr., *G. Prance et al. 28889* (INPA, K). Pará: Belém, rio Mojú, 19.VIII.1980, fl., fr., *W. Rodrigues et al. 10253* (INPA, MO, US).

25. ***Myrcia selloi*** (Spreng.) N. Silveira, *Loefgrenia* 89: 5. 1986. Figure 8.

Shrubs, 1–5 m tall. Leaves 2–4 × 0.8–1 cm, elliptic to obovate, apex acute, base cuneate, midvein flat or raised on the adaxial lamina surface, petiole 0.1 cm long. Inflorescence paniculiform, main axis ca. 2.5–4 cm long; calyx 5-lobed, acute; staminal disk and style base glabrous. Fruits not seen.

Myrcia selloi is distributed from Bolivia to Brazil and northern Argentina (WCSP 2014). In Brazil, it is cited for the Atlantic Forest and "*Pampas*" vegetation from Paraná to Rio Grande do Sul (Sobral et al. 2014). Here new geographical localities are recorded for *Cerrado* vegetation in Goiás and for the Atlantic Forest in Rio de Janeiro (Brazil).

Material examined: BRAZIL. Goiás: Alto Paraíso de Goiás, Parque Nacional Chapada dos Veadeiros, 19.X1990, fl., *G.M. Hatschbach & J.M. Silva 54767* (MBM, MO, US). Rio de Janeiro: Rio de Janeiro, Morro do Leme, 4.X.1972, fl., *D. Sucre & J.F. da Silva 9669* (INPA, MBM, MO, R, RB, SP, US); Rio de Janeiro, 1838–1842, fl., *C. Wilkes s.n.* (US 86714).

26. ***Myrcia tijucensis*** Kiaersk., Enum. *Myrt. bras.*: 102. 1893. Figure 8.

Trees, ca. 4 m tall. Leaves 5.5–7.5 × 1.5–2.8 cm, elliptic, apex acute to acuminate, base cuneate to rounded, midvein flat on the adaxial lamina surface, petiole 0.2–0.4 cm long. Inflorescence paniculiform, main axis ca. 4–5 cm long; calyx 5-lobed, rounded; staminal disk and style base puberulent. Fruits 0.6–0.8 cm diam., subgloboid, glabrous, purple when mature.

Myrcia tijucensis is endemic to the southern part of the Brazilian Atlantic Forest (Sobral et al. 2014), and here the northeasternmost record for this species is presented from Espírito Santo (Brazil).

Material examined: BRAZIL. Espírito Santo: Domingos Martins, BR 262, 12.V.1993, fr., *R. Melo-Silva & J.R. Pirani 827* (MO, NY, SPF).

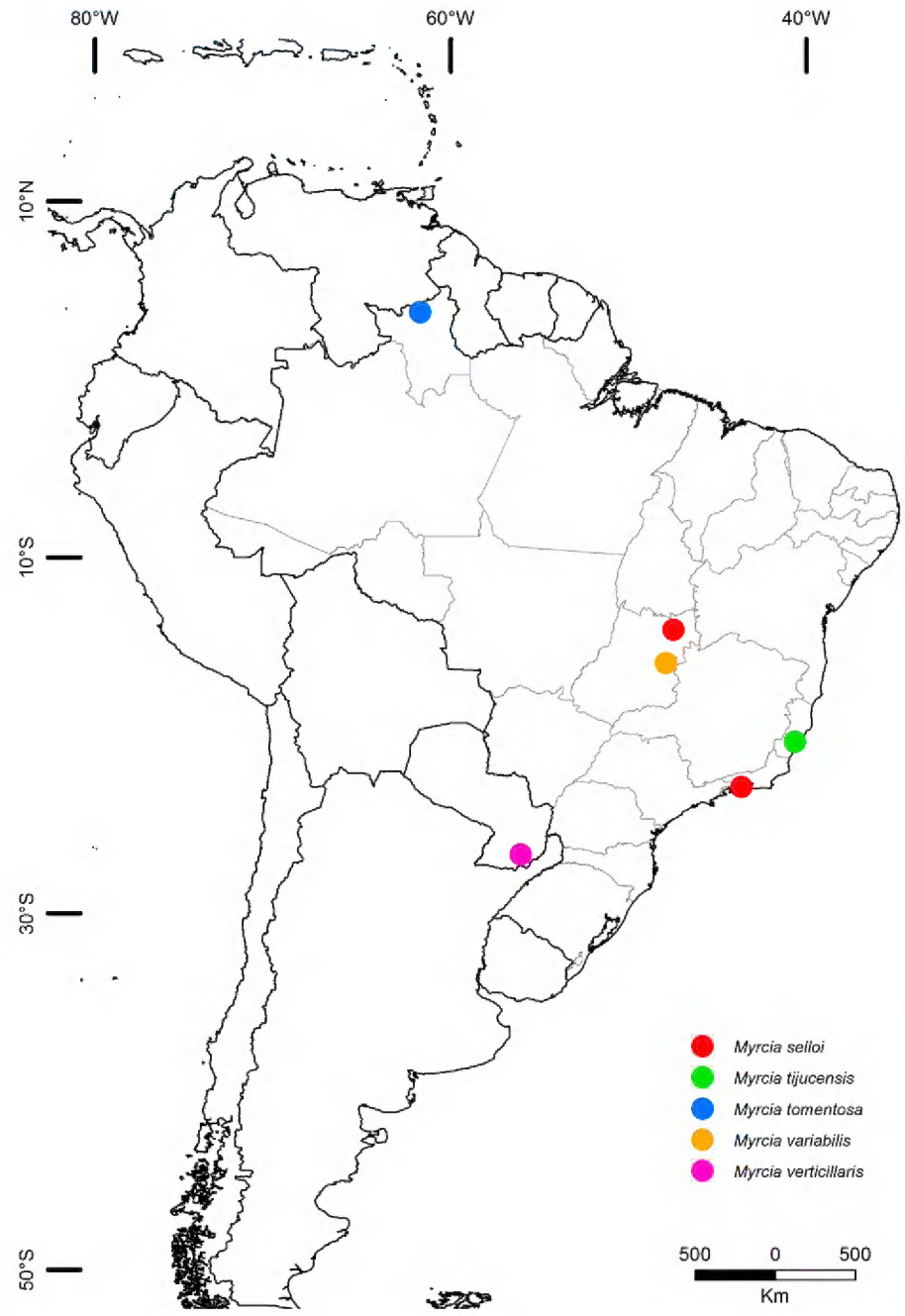

Figure 8. New records of *Myrcia* from South America. *M. selloi* (red), *M. tijucensis* (green), *M. tomentosa* (blue), *M. variabilis* (orange), *M. verticillaris* (pink).

27. ***Myrcia tomentosa*** (Aubl.) DC., *Prodr.* 3: 245. 1828. Figure 8.

Shrubs, up to 2.5 m tall. Leaves 4.5–5.5 × 2.4–3.0 cm, obovate, apex acute to rounded, base cuneate, midvein flat on the adaxial lamina surface, petiole 0.3–0.4 cm long. Inflorescence paniculiform, main axis 5–7 cm long; calyx 5-lobed, acute; staminal disk and style base with scattered hairs. Fruits 0.5–0.6 cm in diameter, globoid, puberulent.

Myrcia tomentosa is widely distributed in South America, from Panama and Trinidad and Tobago to Brazil (WCSP 2014). In Brazil, it occurs in the Amazon and Atlantic Forests and *Cerrado* vegetation (Sobral et al. 2014). Here new geographical localities are recorded in Roraima (Brazil) close to the border with Venezuela and Guyana.

Material examined: BRAZIL. Roraima: Amajari, Serra do Tepequém, Cachoeira do Paiva, 11.V.2013, fl. bud, *A. Melo 1140 et al.* (UFP).

Additional material: BRAZIL. Pernambuco, Igarassu, Usina São José, 12.III.2009, fr., *B.S. Amorim 422 et al.* (NY, RB, UFP).

28. ***Myrcia variabilis*** Mart. ex DC., *Prodr.* 3: 254. 1828. Figure 8.

Shrubs to trees, 1–4 m tall. Leaves 3.5–9 × 2.2–4.2 cm,

ovate to oval, apex rounded, base cordate, midvein flat or raised on the adaxial lamina surface, sessile. Inflorescence paniculiform, main axis 6–10 cm long; calyx 5-lobed, rounded; staminal disk and style base glabrous. Fruits 0.5–0.8 cm in diameter, subgloboid, purple to dark-purple when mature.

Myrcia variabilis is endemic to the Brazilian *Cerrado* and the Atlantic Forest from Bahia to Mato Grosso, and Minas Gerais (Sobral et al. 2014). Here new geographical localities are recorded in Distrito Federal (Brazil).

Material examined: BRAZIL. Distrito Federal: Brasília, Reserva Ecológica do IBGE, 02.X.1981, fr., *B.A.S. Pereira 72* (IBGE, UB, US).

29. ***Myrcia verticillaris*** O.Berg in C.F.P.von Martius & auct. suc. (eds.), *Fl. bras.* 14(1): 206. 1857. Figure 8.

Shrubs, ca. 1 m tall. Leaves 3–4 × 1–2.2 cm, lanceolate, apex acute, base cordate, midvein flat or raised on the adaxial lamina surface, sessile. Inflorescence paniculiform, main axis 5.5–6.5 cm long; calyx 5-lobed, acute; staminal disk and style base glabrous. Fruits not seen.

Myrcia verticillaris is known from southern Brazil in Rio Grande do Sul and in the northern portion of Uruguay (Sobral et al. 2014; WCSP 2014). Here the first geographical record in Paraguay (department ofMissiones), is cited.

Material examined: PARAGUAY. Misiones: Estancia, La Soledad, 6.II.1955, fl., *T.M. Pedersen 3275* (US).

ACKNOWLEDGEMENTS

We are indebted to the organizations which funded our field research, including CNPq, the U.S. National Science Foundation (DEB-0946618), Velux Stiftung, and the Beneficia Foundation; PNADB/Capes; to The Department of Botany of the Smithsonian Institution that provided the Cuatrecasas Fellowship to the first author; to CNPq-INCT, International Association for Plant Taxonomy-IAPT, and Fundação de Amparo à Ciência e Tecnologia do Estado de Pernambuco (FACEPE) for the first author's Ph.D. Grant. We also thanks Dr. Laurence Dorr and Deborah Bell (US), Dr. Jacquelyn Kallunki and Stella Sylva (NY), Dr. Eve Lucas (K), Dr. Germinal Rouhan (P), Dr. Nicolas Fumeaux and Dr. Louis Nusbaumer (G), Dr. Ib Friss (C), Dr. Jacek Wajer (BM), and Mike Hopkins (INPA) for their support; the anonymous reviewer for constructive criticism and James Byng for editorial suggestions.

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Authors' contribution statement: BSA revised the herbarium materials, wrote, and revised the manuscript. JRM wrote and prepared the distribution maps. MA wrote and revised the final text.

Received: May 2014
Accepted: August 2014
Editorial responsibility: James Byng